

CLAIMS

1. Electronic equipment, comprising:

a physical layer circuit having a first transmitter operable to communicate with a child node, a second transmitter operable to communicate with a parent node, and a controller operable to control said physical layer circuit such that, when said physical layer circuit receives a first signal from said child node, said physical layer circuit changes from a first state to a second state and transmits said first signal to said parent node,

when said physical layer circuit receives a third signal for canceling said first signal from said child node before receiving a second signal corresponding to said first signal from said parent node, said physical layer circuit transmits said third signal to said parent node after receiving said second signal from said parent node, and

when said physical layer circuit receives said third signal from said parent node, said physical layer circuit changes from said second state to said first state.

2. Electronic equipment according to claim 1, wherein said physical layer circuit constitutes a physical layer which conforms to the IEEE 1394 standard.

3. Electronic equipment according to claim 2, wherein said first state is an idle state and said second state is a request state, and

wherein said first signal is a request signal for obtaining a right to use a bus for transmission, said second signal is a grant signal, and said third signal is an idle signal.

4. A method for controlling a state of a physical layer circuit, comprising:

receiving in the physical layer circuit a first signal from a child node,

upon receipt of the first signal, controlling the physical layer circuit to change from a first state to a second state and to transmit the first signal to the parent node,

receiving in the physical layer circuit a third signal for canceling the first signal from the child node before receiving a second signal corresponding to the first signal from the parent node,

controlling the physical layer circuit to transmit the third signal to the parent node after receiving the second signal from the parent node, and

controlling the physical layer circuit to change from the second state to the first state after receiving the third signal from the parent node.

5. A method for controlling a state of a physical layer circuit according to claim 4,

wherein the physical layer circuit constitutes a physical layer which conforms to the IEEE 1394 standard.

6. A method for controlling a state of a physical layer circuit according to claim 5,

wherein the first state is an idle state and the second state is a request state, and

wherein the first signal is a request signal for obtaining a right to use a bus for transmission, the second signal is a grant signal, and the third signal is an idle signal.

7. Electronic equipment, comprising:

a physical layer circuit having a first transmitter operable to communicate with a child node, a second transmitter operable to communicate with a parent node, and a controller operable to control said physical layer circuit such that, when said physical layer circuit receives a first signal from said child node, said physical layer circuit changes from a first state to a second state and transmits said first signal to said parent node,

when said physical layer circuit receives a third signal for canceling said first signal from said child node after receiving a second signal corresponding to said first signal from said parent node and changes from said second state to a third state, said physical layer circuit transmits said third signal to said parent node, and

after receiving said third signal from said parent node, said physical layer circuit changes from said third state to said first state.

8. Electronic equipment according to claim 7,

wherein said physical layer circuit constitutes a physical layer which conforms to the IEEE 1394 standard.

9. Electronic equipment according to claim 8,

wherein said first state is an idle state, said second state is a request state, and said third state is a grant state, and

wherein said first signal is a request signal for obtaining a right to use a bus for transmission, said second signal is a grant signal, and said third signal is an idle signal.

10. A method for controlling a state of a physical layer circuit, comprising:

receiving in the physical layer circuit a first signal from a child node;

upon receipt of the first signal, controlling the physical layer circuit to change from a first state to a second state and to transmit the first signal to the parent node;

receiving in the physical layer circuit a third signal for canceling the first signal from the child node after receiving a second signal corresponding to the first signal from the parent node;

controlling the physical layer circuit to change from the second state to a third state and to transmit the third signal to the parent node;

receiving in the physical layer circuit the third signal from the parent node; and

controlling the physical layer circuit to change from the third state to the first state.

11. A method for controlling a state of a physical layer circuit according to claim 10,

wherein the physical layer circuit constitutes a physical layer which conforms to the IEEE 1394 standard.

12. A method for controlling a state of a physical layer circuit according to claim 11,

wherein the first state is an idle state, the second state is a request state, and the third state is a grant state, and

wherein the first signal is a request signal for obtaining a right to use a bus for transmission, the second signal is a grant signal, and the third signal is an idle signal.

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